

Sustainable Haven for Pollinators: McMaster Ground Nesting Bee Garden

SUSTAIN 3S03: Implementing Sustainable Change



Drawing of the finished garden (Full drawing is on page 2)
Photo Credit: Camryn Hardaker-Schabauer



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Overview

We have all heard of the honeybee, but have you heard of the ground-nesting bee? Over 75% of the total bee population across the planet nest underground.[1] Native bees also serve as vital pollinators, supporting our food and ecosystems from the ground up, well beyond the scope of honeybees. Yet in Canada, lethal pesticide exposure,[2] habitat loss from urban expansion, climate change, and numerous other threats are causing their rapid decline. McMaster, a designated Bee City campus, has created various forms of habitats to preserve local bee species, over 200 of which are native to the McMaster area.[3] Recently, sustainability teams have laid the groundwork for a new ground-nesting bee garden that aims to provide a safe nesting and pollination site. The goal of our project is to bring to life the McMaster ground-nesting bee garden, making it a native bee sanctuary.

Objectives

1. Increase the number and species of plants
2. Facilitate a fun and experiential planting event
3. Publicly share information about native, ground-nesting bees

Reporting

To accomplish our first objective, we consulted our CPCs to learn about the existing components of the garden. We received information about the number and species of existing plants in the garden. Additionally, we visited the site to visually assess the space and to plan for the placement of new plants. Following our research, we worked with our CPCs to order 215 plants comprised of 11 species not currently in the garden.

In accomplishing our second objective, we used social and print media to invite students and staff to our event. On November 7th, 2023, a total of 30 volunteers attended the event, which included a planting tutorial by Dr. Susan Dudley, a collaborative garden design discussion, group planting experience, and educational conversations over coffee and Donut Monster donuts. Attendees expressed their appreciation for the opportunity to build meaningful connections with others who shared their interests in sustainability.

To accomplish our third objective, we provided pamphlets to attendees summarizing key information about the importance of protecting native bee populations and ways that individuals can help. To spread information beyond those in attendance, we shared facts on social media, provided resources for creating native bee habits, and facilitated an interactive quiz and giveaway. Following the bee-knowledge quiz, we selected 10 winners to receive a pre-made, solitary bee home of their own. Our social media campaign reached more than 3,785 accounts, generated 167 quiz responses, and had 27,017 total impressions, demonstrating the significant interest in learning about native bees.

Collaborators

We are grateful for the early and ongoing leadership by McMaster's Facility Services, the Bee Team, past SUSTAIN students, and our CPCs for fostering McMaster as a bee sanctuary and creating the Native Bee Nesting Garden. We are also grateful to our CPCs, Facility Services, and all those who supported our project by attending our event, participating in our campaign, and amplifying the message of our project.

References

[1]<https://resjournals.onlinelibrary.wiley.com/doi/full/10.1111/een.12986>

[2]<https://globalnews.ca/news/5816354/southern-ontario-pollinating-bees-lethal-soil/#:~:text=New%20research%20suggests%20ground%2Dnesting,on%20of%20farms%20across%20southern%20Ontario.>

[3]<https://nature.mcmaster.ca/mcmaster-forest/ecology/>

